

Figure 1. Prior Art: Conventional PSA

ପ୍ରତିକାଳୀନ ବିଦେଶୀ ପାଠ୍ୟ ମାଧ୍ୟମରେ

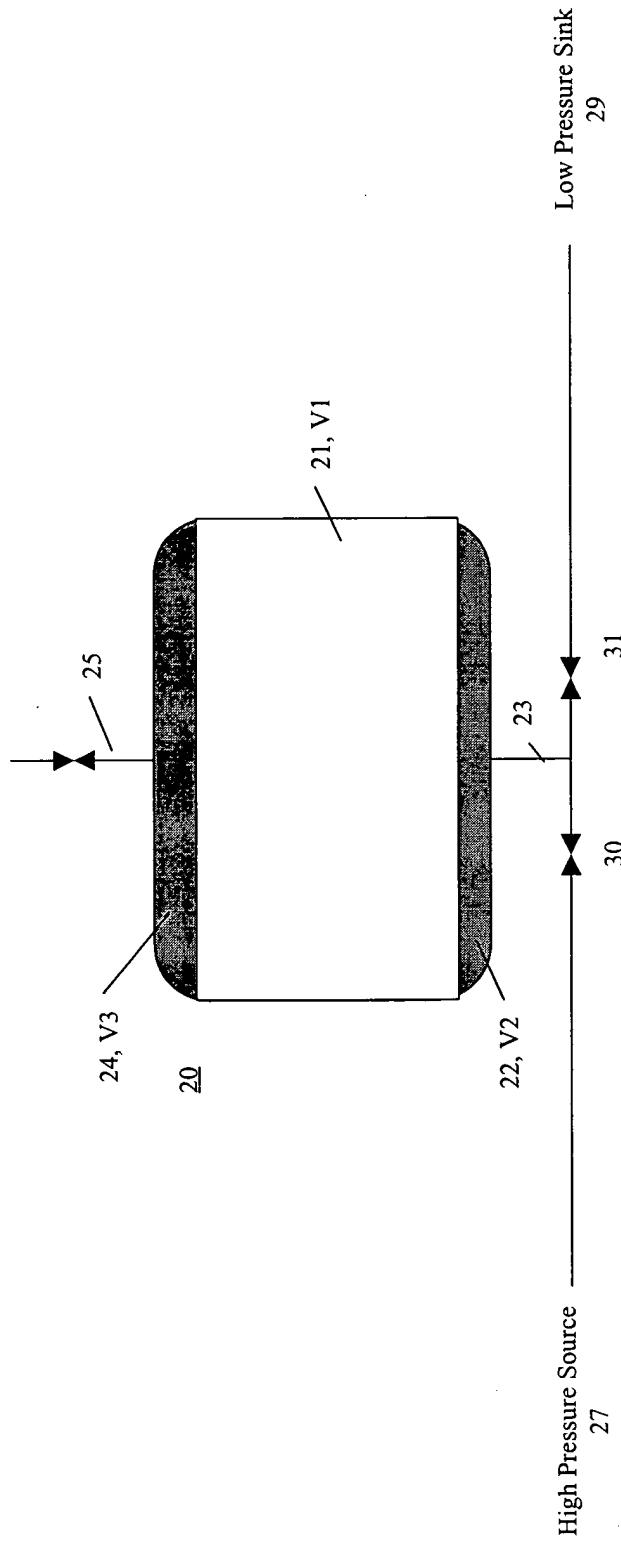


Figure 2a. Invention: Single Bed with Low Void

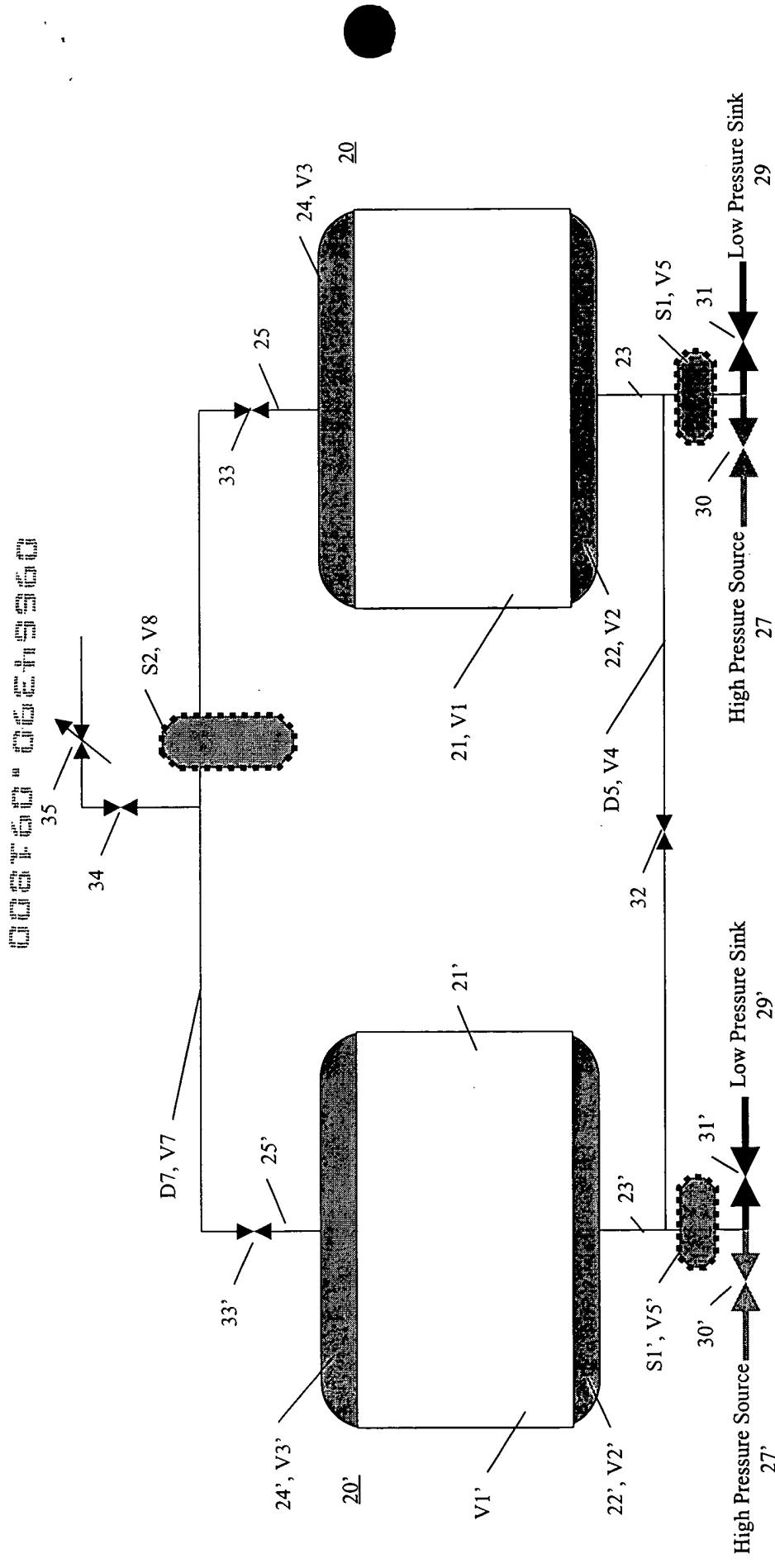


Figure 2b. Invention: Two Bed with Low Void

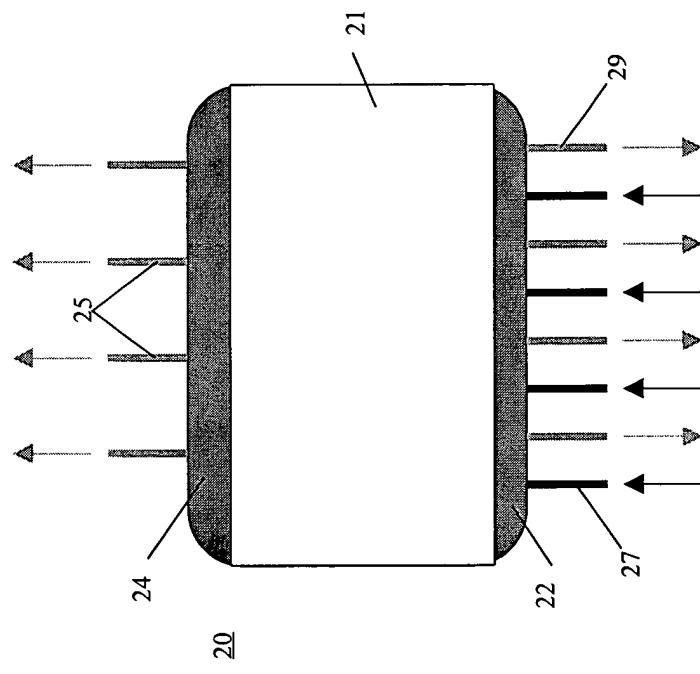


Figure 2c. Invention: Flat Header Bed with Closely Mounted High Pressure Sources and Low Pressure Sinks

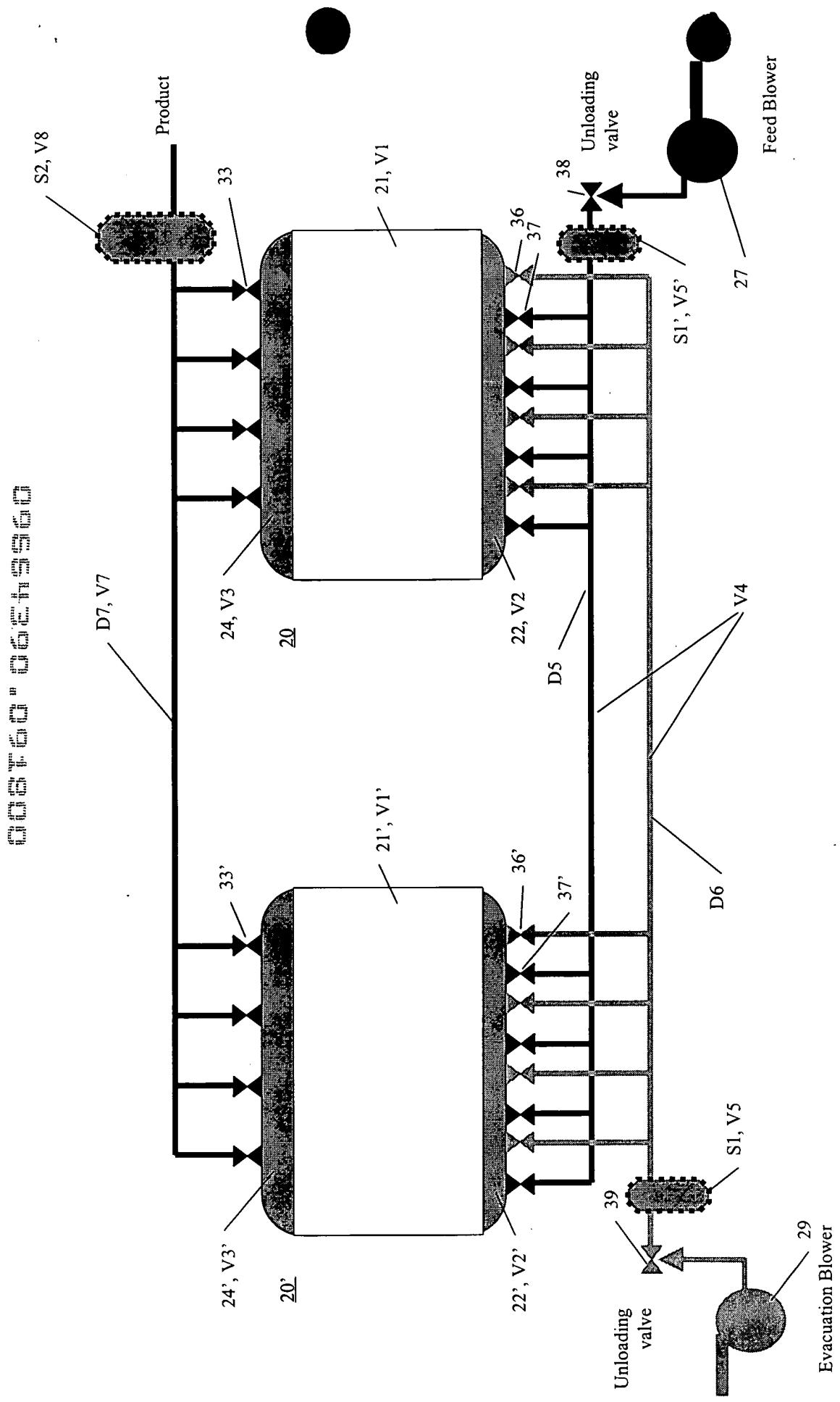
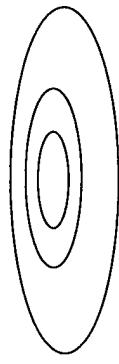
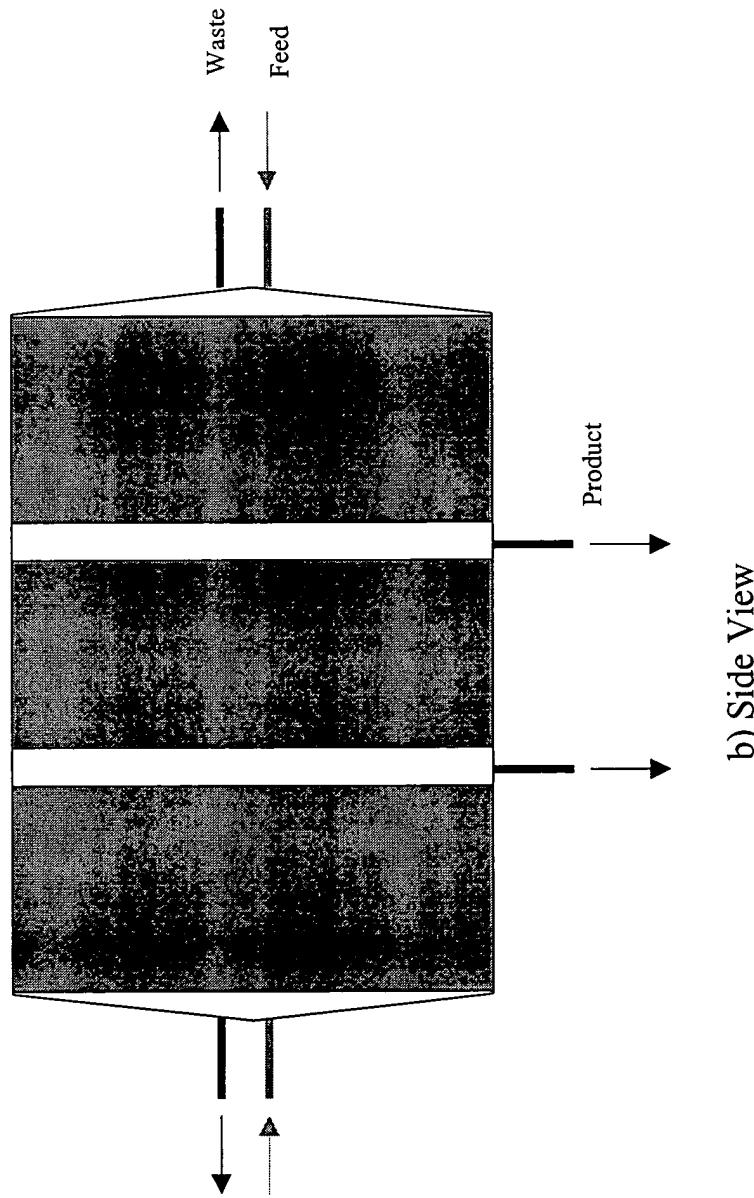


Figure 2d. Invention: Flat Header Bed with Distributed Valves

બેન્ડ વિલ્યુમની સાથે એવી પ્રક્રિયા હોય કે જે અનેક રીતે વિનાયક કરી શકે હોય



a) Top View



b) Side View

Figure 3. Radial Bed

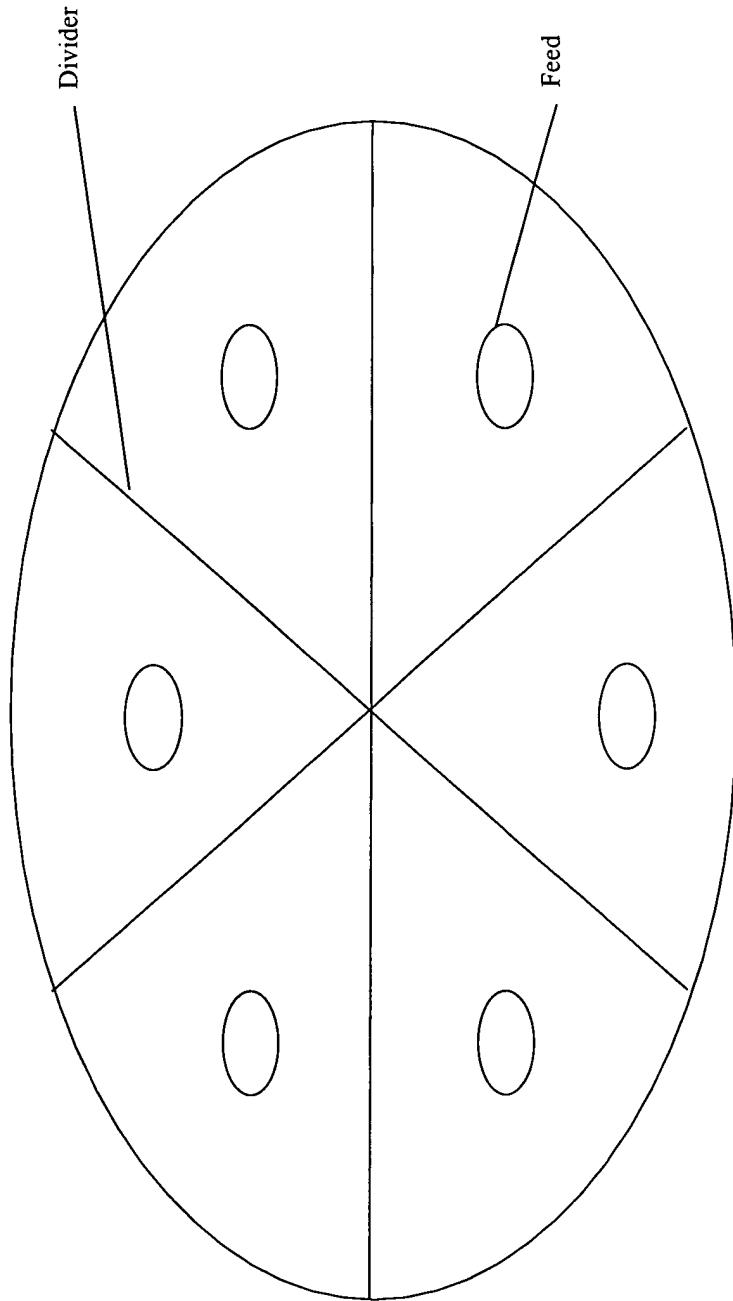


Figure 4. Segmented Bed

Top view of a segmented vertical bed, different sections separated by dividers undergo different PSA process steps such as adsorption, desorption and equalization, etc.

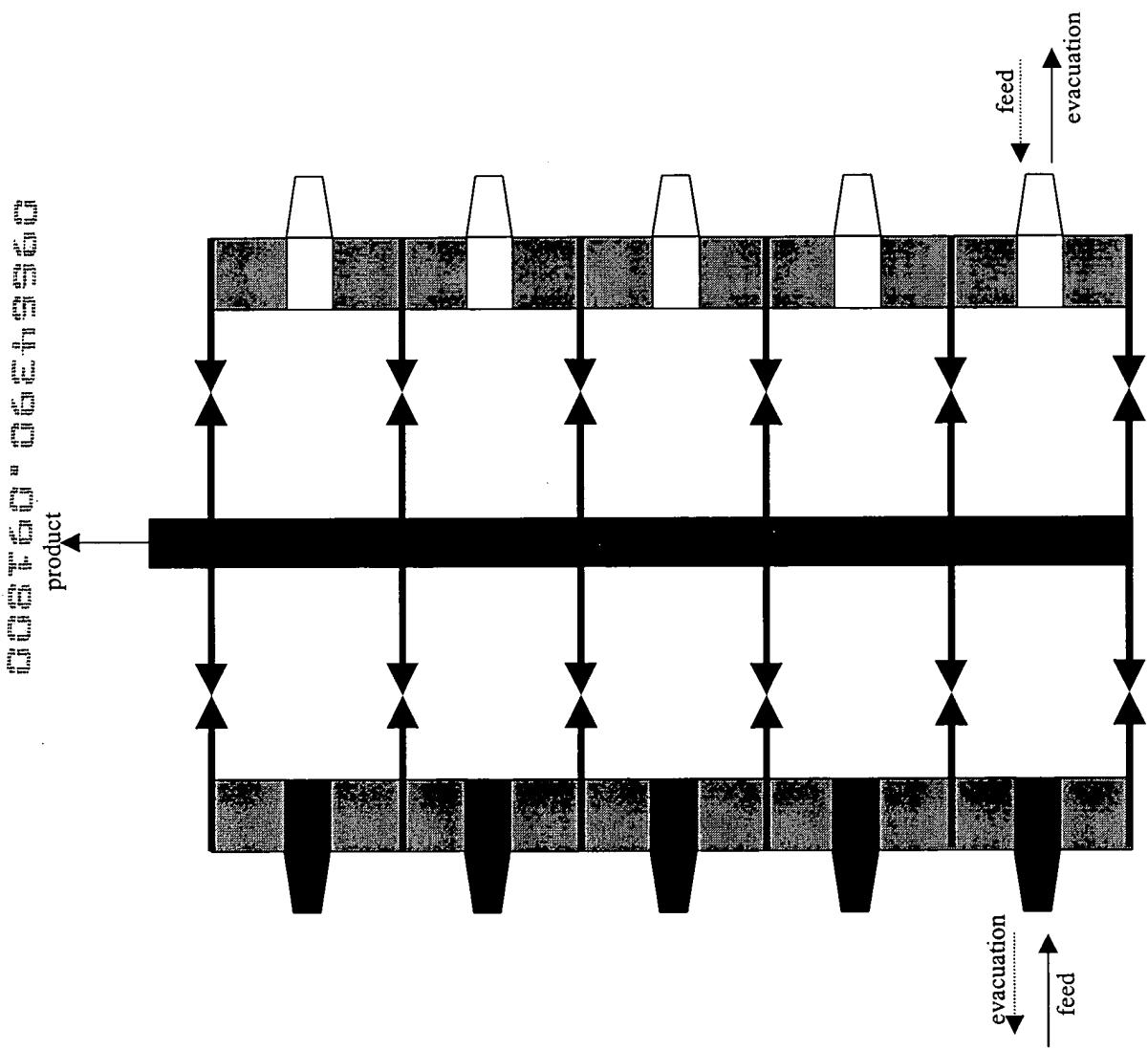


Figure 5. Vertical Plate Bed

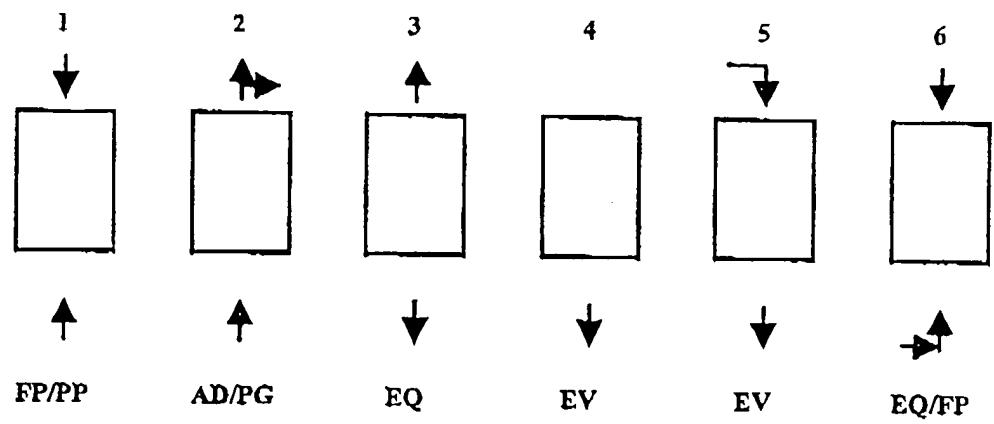


Figure 6 Representative Process Cycle

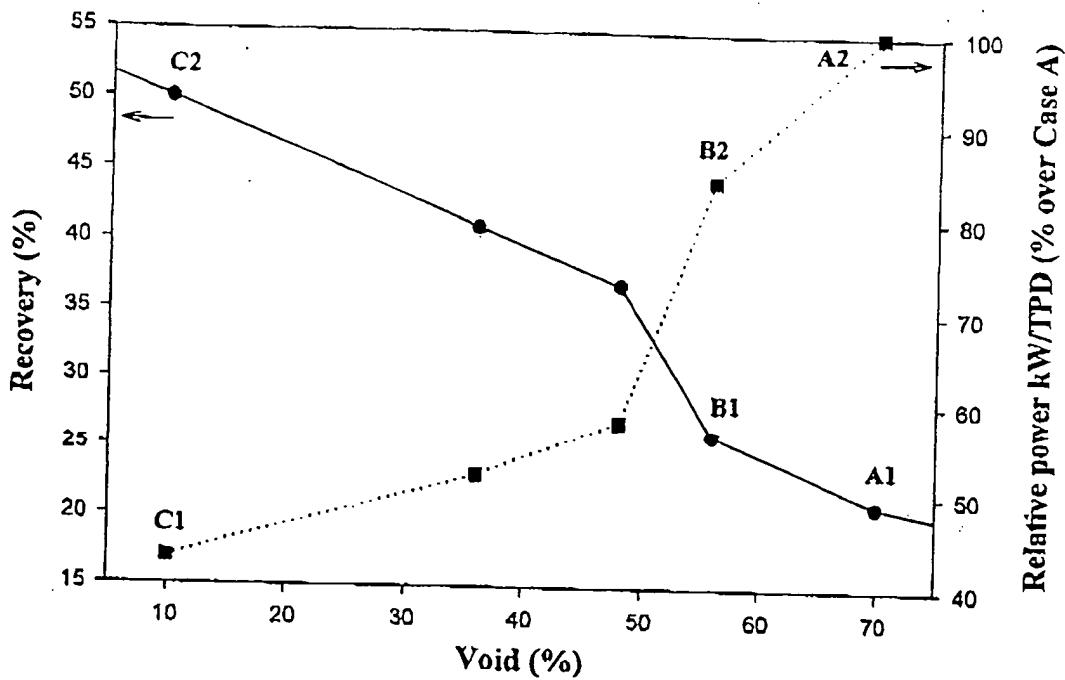


Figure 1 void influence on recovery and power

- Case A: Without the instant invention with large void volume as shown in Figure 1 but with fast cycle time (~2s), low recovery and high power.
- Case B: The instant invention, reduced distribution pipe void volume as shown in Figure 2b.
- Case C: The instant invention, flat header as shown in Figure 2d.

2-Bed system, high and low pressures are 1.5 and 0.3 bars, O₂ purity is 90%, cycle time is about 1~2s.